

Receipt date: 10/11/2006

10574967 - GAI: 1654
Ifw

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/574,967
Applicant : Jonathan M. Brown et al.
Filed : April 7, 2006
TC/A.U. : To be assigned
Examiner : To be assigned

Docket No. : 2833-113
Customer No. : 06449
Confirmation No. : To be assigned

INFORMATION DISCLOSURE STATEMENT

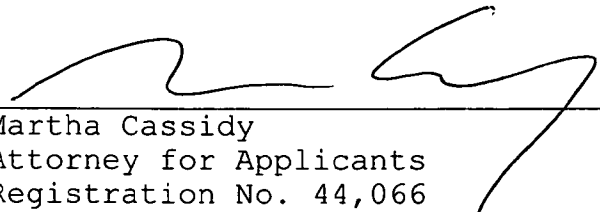
Director of the United States Patent
and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Under the provisions of 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant submits herewith information that the Office may wish to consider in examination of the subject application. Materials submitted for consideration are listed on the attached form PTO-1449. Applicant believes no fee is due in connection with this submission but if the Office deems a fee is necessary, the Commissioner is hereby authorized to charge the fee to deposit account number 02-2135. An extra copy of this sheet is attached for that purpose.

Respectfully submitted,

By



Martha Cassidy
Attorney for Applicants
Registration No. 44,066
ROTHWELL, FIGG, ERNST & MANBECK, p.c.
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202) 783-6040

MC/JC:ks
Enclosure(s)

1354347v1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /MA/



**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

				Complete if Known	
				Application Number	10/574,967
				Filing Date	April 7, 2006
				First Named Inventor	Jonathan M. Brown et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
				Confirmation No.	To be assigned
Sheet	1	of	5	Attorney Docket Number	2833-113

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
/MA/		5,254,730		KILGORE	10-19-1993
		5,324,658		COX et al.	06-28-1994
		5,393,669		BROWN	02-28-1995
		5,627,044		BROWN	05-06-1997
		5,698,401		FESIK et al.	12-16-1997
		5,804,390		FESIK et al.	09-08-1998
		5,891,643		FESIK et al.	04-06-1999
		6,111,066		ANDERSON et al.	08-29-2000
		6,335,196		ANDERSON et al.	01-01-2002
		6,340,578		ANDERSON et al.	01-22-2002
/MA/		6,376,253		ANDERSON et al.	04-23-2002

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code.

⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				<i>Complete if Known</i>	
				Application Number	10/574,967
				Filing Date	April 7, 2006
				First Named Inventor	Jonathan M. Brown et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
				Confirmation No.	To be assigned
Sheet	2	of	5	Attorney Docket Number	2833-113

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office ³ Code	Number ⁴	Kind ⁵ (if known)			
		JP	02-208579		HARUKI et al.	08-20-1990	
/MA/		WO	98/48264		FESIK et al.	10-29-1998	
/MA/		WO	99/11589		ANDERSON et al.	03-11-1999	
Examiner Signature	/Maury Audet/				Date Considered	09/13/2010	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code.

⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				<i>Complete if Known</i>	
				Application Number	10/574,967
				Filing Date	April 7, 2006
				First Named Inventor	Jonathan M. Brown et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
				Confirmation No.	To be assigned
Sheet	3	of	5	Attorney Docket Number	2833-113

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published		T ²
/MA/		Archer et al., "Transforming Growth Factor β 1: NMR Signal Assignments of the Recombinant Protein Expressed and Isotopically Enriched Using Chinese Hamster Ovary Cells" Biochem. 32:1152-1163 (1993)		
		Archer et al., "Transforming Growth Factor β 1: Secondary Structure As Determined by Heteronuclear Magnetic Resonance Spectroscopy" Biochem. 32:1164-1171 (1993).		
		Bax and Tjandra, "High-resolution Heteronuclear NMR of Human Ubiquitin in an Aqueous Liquid Crystalline Medium" J. Biomol. NMR 10: 289-292 (1997).		
		Bax, "Multidimensional Nuclear Magnetic Resonance Methods for Protein Studies" Curr. Opin. Struct. Biol. 4:738-744 (1994).		
		Clore and Gronenborn, "NMR Structures of Proteins and Protein Complexes Beyond 20,000 M _r " Nat. Struct. Biol. 4:849-853 (1997).		
		Clore et al., "Measurement of Residual Dipolar Couplings of Macromolecules Aligned in the Nematic Phase of Colloidal Suspension of Rod-Shaped Viruses" J. Am. Chem. Soc. 120:10571-110572 (1998).		
		Coughlin et al., "Improved Resolution and Sensitivity of Triple-Resonance NMR Methods for the Structural Analysis of Proteins by Use of a Backbone-Labeling Strategy" J. Am. Chem. Soc. 121:11871-11874 (1999).		
		Duthaler, "Recent Developments in the Stereoselective Synthesis of α -Aminoacids" Tetrahedron 50:1539-1650 (1994).		
		Fleming et al., "Cellulose Crystallites: A New and Robust Liquid Crystalline Medium for the Measurement of Residual Dipolar Couplings" J. Am. Chem. Soc. 122:5224-5225 (2000).		
		Fowler et al., "Rapid Determination of Protein Folds Using Residual Dipolar Couplings" J. Mol. Biol. 304:447-460 (2000).		
		Giesen et al., " ¹ H-Filtered Correlation Experiments for Assignment and Determination of Coupling Constants in Backbone Labelled Proteins" J. Biomol. NMR 22:21-26 (2002).		
		Giesen et al., "Measurement of One-Bond ¹ H α - ¹³ C α Couplings in Backbone-Labelled Proteins" J. Biomol. NMR 19:255-260 (2001).		
		Grzesiek et al., " ¹³ C Line Narrowing by ² H Decoupling in ² H/ ¹³ C/ ¹⁵ N-Enriched Proteins. Application to Triple Resonance 4D J Connectivity of Sequential Amides" J. Am. Chem. Soc. 115(9):4369-4370 (1993).		
		Hansen et al., "Tunable Alignment of Macromolecules by Filamentous Phage Yields Dipolar Coupling Interactions" Nat. Struct. Biol. 5:1065-1074 (1998).		
/MA/		Hus et al., "Determination of Protein Backbone Structure Using Only Residual Dipolar Couplings" J Am. Chem. Soc. 123:1541-1542 (2001).		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /MA/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				<i>Complete if Known</i>	
				Application Number	10/574,967
				Filing Date	April 7, 2006
				First Named Inventor	Jonathan M. Brown et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
				Confirmation No.	To be assigned
Sheet	4	of	5	Attorney Docket Number	2833-113

/MA/		Hus et al., "De novo Determination of Protein Structure by NMR Using Orientational and Long-Range Order Restraints" J. Mol. Biol. 298:927-936 (2000).	
		Ikura et al., "A Novel Approach for Sequential Assignment of ¹ H, ¹³ C and ¹⁵ N Spectra of Larger Proteins: Heteronuclear Triple-Resonance Three-Dimensional NMR Spectroscopy. Application to Calmodulin." Biochem. 29:4659-4667 (1990).	
		Ikura et al., "Secondary Structure and Side-Chain ¹ H and ¹³ C Resonance Assignments of Calmodulin in Solution by Heteronuclear Multidimensional NMR Spectroscopy" Biochem. 30:9216-9228 (1991).	
		Kiddle et al., "Residual Dipolar Couplings as New Conformational Restraints In Isotopically ¹³ C-enriched Oligosaccharides" FEBS Lett. 436:128-130 (1998).	
		Lankiewicz et al., "Synthesis of Amino Acid Derivatives Substituted in the Backbone with Stable Isotopes for Application in Peptide Synthesis" J. Chem. Soc. Perkins Trans. 1:2503-2510 (1994).	
		Losonczi et al., "Improved Dilute Bicelle Solutions for High-resolution NMR of Biological Macromolecules" J. Biomol. NMR 12:447-51 (1998).	
		Lustbader et al., "Expression of Human Chorionic Gonadotropin Uniformly Labeled with NMR Isotopes in Chinese Hamster Ovary Cells: An Advance Toward Rapid Determination of Glycoprotein Structures" J. Biomol. NMR 7:295-304 (1996).	
		Martin et al., "Stereoselective Synthesis of L-[1- ¹³ C], L-[2- ¹³ C] and L-[¹⁵ N] Amino Acids" Isotopes Environ. Health Stud. 32:15-19 (1996).	
		Mueller et al., "A Method for Incorporating Dipolar Couplings into Structure Calculations in Cases of (Near) Axial Symmetry of Alignment" J. Biomol. NMR 18:183-188 (2000).	
		Mueller et al., "Global Folds of Proteins with Low Densities of NOEs Using Residual Dipolar Couplings: Application to the 370-Residue Maltodextrin-binding Protein" J. Mol. Biol. 300:197-212 (2000).	
		Oppolzer, "Asymmetric Alkylations of a Sultam-Derived Glycinate Equivalent: Practical Preparation of Enantiomerically Pure α -Amino Acids" Tetrahedron Letts. 30:6009-6010 (1989).	
		Oppolzer et al., "Asymmetric Synthesis of α -Amino Acids and α -N-Hydroxyamino Acids from N-Acylobornane-10, 2-sultams: 1-Chloro-1-nitrosocyclohexane As a Practical [NH ₂] Equivalent" Helv. Chim. Acta, 75:1965-1978 (1992).	
		Oppolzer et al., "Asymmetric Alkylations of a Sultam-Derived Glycine Equivalent: Practical Preparation of Enantiomerically Pure α -Amino Acids" Helv. Chim. Acta, 77:2363-2380 (1994).	
		Ottiger and Bax, "Bicelle-based Liquid Crystals for NMR-Measurement of Dipolar Couplings at Acidic and Basic pH Values" J. Biomol. NMR 13:187-191 (1999).	
		Prosser et al., "Use of a Novel Aqueous Liquid Crystalline Medium for High-Resolution NMR of Macromolecules in Solution" J. Am. Chem. Soc. 120:11010-11011 (1998).	
		Ragnarsson, "Proteinogenic Amino Acids Labelled with ¹⁵ N and/or ¹³ C for Application in Peptide Synthesis: A Short Review with a Comprehensive List of Published Derivatives" J. Peptide Sci. 3:149-156 (1995).	
/MA/		Rückert and Otting, "Alignment of Biological Macromolecules in Novel Nonionic Liquid Crystalline Media for NMR Experiments" J. Am. Chem. Soc. 122:7793-7797 (2000).	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /MA/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				<i>Complete if Known</i>	
				Application Number	10/574,967
				Filing Date	April 7, 2006
				First Named Inventor	Jonathan M. Brown et al.
				Group Art Unit	To be assigned
				Examiner Name	To be assigned
				Confirmation No.	To be assigned
Sheet	5	of	5	Attorney Docket Number	2833-113

/MA/		Schöllkopf, "Enantioselective Synthesis of Nonproteinogenic Amino Acids" Topics. Curr. Chem. 109:65-84 (1983).		
↓		Shimizu et al., "Derivation of the Bound-State Conformation of a Ligand in a Weakly Aligned Ligand-Protein Complex" J. Am. Chem. Soc., 121:5815-5816 (1999).		
↓		Shuker et al., "Discovering High-Affinity Ligands for Proteins: SAR by NMR" Science 274:1531-1534 (1996).		
↓		Soloshonok et al., "Asymmetric Synthesis of Phosphorus Analogues of Dicarboxylic α -Amino Acids" J. Chem. Soc. Perkins Trans. 1:1525-1529 (1992).		
↓		Tjandra and Bax, "Direct Measurement of Distances and Angles in Biomolecules by NMR in a Dilute Liquid Crystalline Medium" Science 278:1111-1114 (1997).		
↓		Tolman et al., "Nuclear Magnetic Dipole Interactions in Field-Oriented Proteins: Information for Structure Determination in Solution" Proc. Natl. Acad. Sci. USA 92:9279-9283 (1995).		
↓		Wang et al., "A Liquid Crystalline Medium for Measuring Residual Dipolar Couplings over a Wide Range of Temperatures" J. Biomol. NMR 12:443-446 (1998).		
↓		Weller, C. et al., "Structural and Conformational Analysis of Glycan Moieties in Situ on Isotopically ^{13}C , ^{15}N -Enriched Recombinant Human Chorionic Gonadotropin" Biochem. 35:8815-8823 (1996).		
/MA/		Winkler et al., "Principles and Results of Stable Isotope Labelling of L- α -Aminoacids by Combined Chemical and Enzymatic Methods", Isotopes Environ. Health Stud. 31:161-190 (1995).		
Examiner Signature	/Maury Audet/		Date Considered	09/13/2010

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

#1353817v1